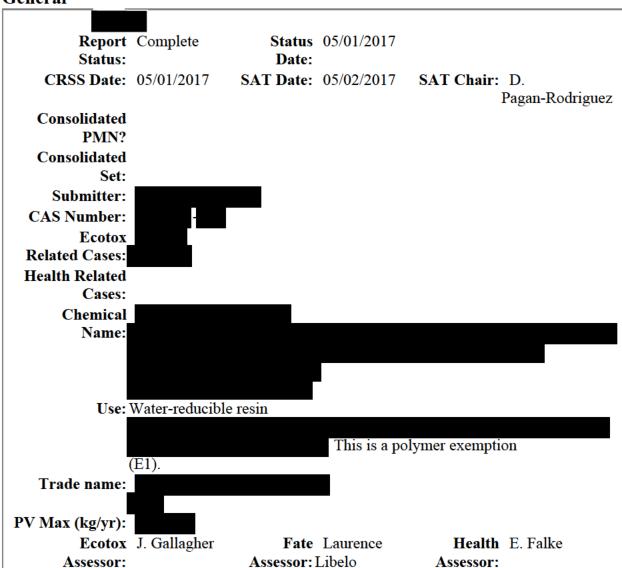
SAT Report for Case # P-17-0281

General



Physical Chemical Information

Molecular Weight:	Physical State - Neat:	(Est.)	
Percent 500:	Percent 1000:		
Melting Point (Measured):	Melting Point (est):	MPD (EPI):	
Vapor	Vapor	VP	
Pressure:	Pressure	(EPI):	
	(est):	· · · · · · · · · · · · · · · · · · ·	
Water	Water	Water	
Solubility:	Solubility	Solubility	
	(EST):	(EPI):	
Log		Log	
Kow:		Kow (EPI):	
Log	Log P	, ,	
P:	Comment:		

SAT Concern

Ecotox Rating 1	Ecotox	
(1):	Rating	
	Comment	
	(1):	
Ecotox	Ecotox	
Rating (2):	Rating	
	Comment	
	(2):	
Health Rating 1-2	Health	
(1):	Rating	
	Comment	
	(1):	
Health Rating	Health	
(2):	Rating	
	Comment	
	(2):	

PBT Ratings

Persistence	Bioaccumulation	Toxicity	Comments
3	1	1	

Exposure
Based Review
(Health)?
Exposure Based
Review
(Ecotox)?
SAT IRRIT. DI

SAT IRRIT, DEV Keywords: (UNCERT)

Fate Assessment P-17-0281

Summary: FATE:



Time for complete ultimate aerobic biodeg > mo

Sorption to soils/sediments = v.strong

PBT Potential: P3B1

*CEB FATE: Migration to ground water = negl

Overall

wastewater treatment removal is 90% via sorption.

Sorption to sludge

is strong based on high molecular volume.

Air Stripping

(Volatilization to air) is negligible based on high molecular volume.

Removal by biodegradation in wastewater treatment is negligible based on high molecular volume.

The aerobic aquatic biodegradation

half-life is greater than months based on high molecular volume.

The

anaerobic aquatic biodegradation half-life is greater than months based on high molecular volume.

Sorption to soil and sediment is very strong

based on high molecular volume.

Migration to groundwater is

negligible based on high molecular volume.

PMN Material:

High

Persistence (P3) is based on the anaerobic biodegradation half-life and high molecular volume.

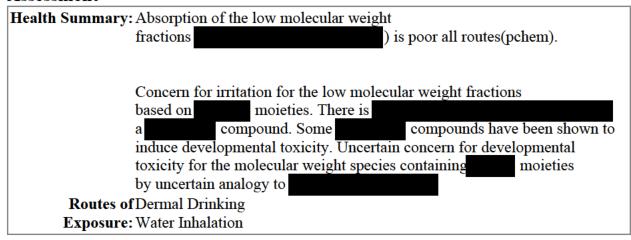
Low Bioaccumulation potential (B1) is based on high molecular volume.

Removal in 90 WWT/POTW (Overall):

Condition	Rating Values	Comment
	w/ Rating Description	
WWT/POTW	3	
Sorption:		
WWT/POTW	4	
Stripping:		
Biodegradation	4	
Removal:		
Biodegradation		
Destruction:		
Aerobic Biodeg	4	
Ult:		
Aerobic Biodeg		
Prim:		
Anaerobic Biodeg	4	
Ult:		
Anaerobic Biodeg		
Prim:		
Hydrolysis (t1/2 at pH 7,25C) A:		
Hydrolysis (t1/2		
at pH 7,25C) B:		
Sorption to	1	
Soils/Sediments:		
Migration to	1	
Ground Water:		
Photolysis A,		
Direct:		
Photolysis B,		
Indirect:		
Atmospheric Ox		
A, OH:		
Atmospheric Ox B, O3:		

Health

Assessment



Test

Data Submitted

Test Data Other Test data information: No concerns for **Submitted:** alkoxysilane moieties because they are not expected to be reactive in this PMN substance.

Ecotox Assessment

Test organism	Test	Test	Predicted	Measured	Comments
	Type	Endpoint			
Fish	96-h	LC50	*		
Daphnid	48-h	LC50	*		
Green Algae	96-h	EC50	*		
Fish	_	Chronic	*		
		Value			
Daphnid	-	Chronic	*		
		Value			
Green Algae	-	Chronic	*		
		Value			

Factors	Most Sensitive Endpoint	Assessment Factor	СоС	Comment
Acute		5		*
Acquatic:				
Chronic		10		*
Acquatic:				

Ecotox Route of No

Exposure? releases to water

Factors	Values	Comments
SARs:	Alkoxysilane	
SAR	Alkoxysilane	
Class:		
TSCA	Alkoxysilanes	
NCC Category?		

Recommended Testing

Ecotox

Value Comments

Predictions are based on SARs for alkoxysilane;

SAR chemical class = alkoxysilane;

S < 1 ppb (P); pH7; effective concentrations based on 100% active ingredients and nominal concentrations; hardness <150.0 mg/L as CaCO3; and TOC <2.0 mg/L;

Focus Report/Decision Document:

Environmental

Hazard and Risk (P-17- 0281)

Environmental Hazard:Environmental hazard is relevant to whether a new chemical substance is likely to present unreasonable risks because the significance of the risk is dependent upon both the hazard (or toxicity) of the chemical substance and the extent of exposure to the substance. EPA estimated environmental hazard of this new chemical substance using hazard data on analogous chemicals. Based on these estimated hazard values from the analogous chemicals, EPA concludes that this chemical substance has low environmental hazard.

- · Substance falls within a TSCA New Chemicals Category of Alkoxysilanes.
- · SAR chemical class of alkoxysilanes.
- · For the assessed PMN low hazard is based on no effects at saturation.
- · If a polymer under the same CAS RN is produced differently [i.e, changes in the proportion of repeating units, the average molecular weight, percentage of low molecular weight (LMW) components, and/or proportion of surface acting monomers], hazard concerns will remain low.

Environmental Risk:

· Risks were not identified for ecotoxicity.

Testing Recommendations:

· None

Ecotox Factors Comments